

two five bit priority CAM cells and array 960 comprises thirty-two five-bit destination CAM cells 920.

JA  
11/27/07

lines 12-22

Please amend the paragraph at page 16, ~~line 11 through page 17, line 1~~ as follows:

During the connection trial, the priority level of the cells is decided. Connection requests are generated accordingly and made to a grant generator (e.g., grant generator 129 of Figure 1, grant generator 1040 of ~~Figure 10~~ Figure 10B). One embodiment achieves the advantage of higher performance with a weighted round robin (WRR) based priority selection, a process known in the art. In another embodiment, other selection schemes are used, such as strict priority based selection. Conventional WRR based priority selection algorithms would give to each cell the same chance of selection if the accumulated weight is greater than certain one criterion, a term known in the art. The WRR based priority selection process employed by an embodiment of the present invention however applies additional criteria in its selection process, e.g., the number of different available trial slots and the urgency level associated therewith.

Please amend the paragraph at page 31, lines 12-18 as follows:

~~FIGURE 10 is~~ FIGURES 10A and 10B provide an exemplary circuit diagram of camQ architecture 1000, in accordance with one embodiment of the present invention. CamQ architecture 1000 comprises priority CAM cell array 1010 of Figure 10A (e.g. array 950 of Figure 9), destination CAM cell array 1020 of Figure 10A (e.g. array 960 of Figure 9), and grant generator 1040 of Figure 10B (e.g., Binary Round Robin Tree Structure (BRRT) 2000 of Figure 12B). Priority 1030 of Figure 10B is received for activating enable lines corresponding to cells of priority CAM cell array 1010. In one

embodiment, camQ architecture 1000 further comprises distributed OR gate 1050 of Figure 10B.

*Please amend the paragraph at page 32, lines <sup>5-11</sup>~~6-12~~ as follows:*

With reference to Figure 9, Requests 911 are transmitted to a grant generator (e.g., grant generator 1040 of ~~figure 10~~ Figure 10B). The grant generator transmits grants 915 to cells that are selected for transmission. In one embodiment, the grant generator is a BRRT structure. Where the grant generator is for the input queue, the grant generator may be referred to as an input-side BRRT (iBRRT), and where the grant generator is for the output queue, the grant generator may be referred to as an egress BRRT (eBRRT).

*Please amend the paragraph at page 36, lines 2-9 as follows:*

BRRT structure 2000 thus provides fast one-hot selection featuring a  $O(\log 2(n))$  process. Advantageously, this  $O(\log 2(n))$  process achieves programmable preference, which is more difficult to achieve with architectures using conventional  $O(n)$  algorithms. BRRT structure 2000 allows implementation of random selection by counter, in one embodiment by bit reversal. BRRT structure 2000 can be used in a grant generator (e.g., grant generator 129 of Figure 1 or grant generator 1040 of ~~Figure 10~~ Figure 10B) and for 'Write address' signal generation with a one-hot vacancy vector.

*Please amend the paragraph at page 39, lines <sup>3-8</sup>~~1-6~~ as follows:*

With reference to ~~Figure 10~~ Figure 10B, camQ architecture 1000 comprises distributed OR gate 1050. Distributed OR gate 1050 of Figure 10B comprises a plurality of OR gates (e.g., OR gate 1600 of Figure 16. If a request associated with a particular input port is granted, the data needs to be transmitted to the corresponding destination. In